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ALEXANDER WINTON  
Winton Motor Carriage Co. and One of the Pioneers of the Industry  
In America

THE MOTOR AGE

THE CHICAGO  
AUTOMOBILE SHOW

**T**WENTY THOUSAND members of the best families of Chicago will be invited to attend an informal opening of the automobile show. The event is scheduled for March 23 to 30—Saturday to Saturday—but after consultation with the exhibitors, the management has decided to issue the invitations referred to for a private inspection on Friday evening.

Possession of the Coliseum will be taken on Wednesday morning and the same evening the building will be ready for the installation of exhibits. Most of the exhibitors who have so far secured space have agreed to start work Thursday morning and practically all of them have agreed to have their stands ready at 6 p. m. on Friday.

There will be no charge for admission to this informal opening and admission will be by invitation only. There will be a concert by Phinney's United States band Friday evening and every afternoon and evening during the continuance of the show.

For the information of Chicago people, among whom copies of this issue of the Motor Age will circulate largely, the following information concerning the history of the preliminary arrangements for the show is presented.

The coming event is under the same management as the phenomenally successful Chicago cycle shows. About the middle of July, last year, the Motor Age, as the leading western exponent of matters connected with the automobile, announced that it would promote an exhibition to take place at the Coliseum in November. The preliminaries had been completed and the management was

about to issue printed matter when the Inter Ocean announced its show at Washington Park in September.

After consultation with a number of people in the trade the Motor Age concluded that the industry was not ready for two events so close together and that the Inter Ocean, as a representative daily, ought to be able to promote a show which would be of vast value to the manufacturers. It was, of course, at the time supposed that the Inter Ocean was to conduct the show in fact as well as in name.

Unfortunately the Washington Park show was not of such a character as to encourage manufacturers to again visit Chicago. There were many complaints of unfair treatment. Many announced that they would never again exhibit in this city. The Motor Age, however, announced its exhibition and there were in the industry a number of manufacturers who had had previous experience with the management and who lost no time in securing space for their exhibits.

Shortly afterward the National Association of Automobile Manufacturers passed a resolution which was practically a recommendation to its members not to take part in the exhibition. The members felt that they were being called upon to support too many exhibitions.

This occurred during January. A representative of Motor Age at once went to New York and induced the president of the association to call a special meeting of the directors and to give him a chance to be heard.

The result of this meeting was entirely satisfactory to the Chicago management. The directors gave a courteous hearing

to its representative and learned so many things about the way the show would be conducted that the resolution previously adopted was withdrawn and notice was served on the members to that effect.

The management of the First National Automobile Exhibition has had a great deal of experience in the conduct of industrial exhibitions. Chicagoans will remember the cycle shows of 1895 and 1896 above referred to. They were the most successful events in their line ever held in the United States. There is every reason to believe that the coming show will be equally successful from the standpoint of public attendance and equally profitable to the manufacturers.



The show has been more extensively advertised than any other of its kind ever held. Literature has been scattered broadcast for the last four months and if there is a man in the trade who does not know all about the show it is because he has purposely refused to be enlightened. The result is that the attendance of visitors from a distance will be sufficient to fill the building comfortably and that the exhibits will include those of nearly every maker of prominence in this country. Few of them feel that they can afford to stay away from Chicago.

The management will not confine itself to the exhibits to be made by the makers, however, but has arranged for a number of novelties and oddities in the automobile line never before exhibited.

Some of the exhibits were arranged for as long as four months ago. Most of the makers have taken space within the last two weeks, however, and the list is now thoroughly representative.



The list of exhibitors who had contracted for space up to Monday of this week was as follows:

Electric Vehicle Co., New York.

National Automobile & Electric Co., Indianapolis.

Mobile Co. of America, New York.

Woods Motor Vehicle Co., Chicago.

Scott Automobile Co., St. Louis.

E. R. Thomas Motor Co., Buffalo.

Remington Automobile Co., Illon, N. Y.  
Baldwin Automobile Co., Connellsville, Pa.

Olds Motor Works, Detroit.

Knox Automobile Co., Springfield, Mass.

Milwaukee Automobile Co., Milwaukee.

Fanning Mfg. Co., Chicago.

Eastman Automobile Co., Cleveland.

Automobile & Cycle Parts Co., Cleveland.

Patee Motor Bicycle Co., Indianapolis.

Ralph Temple Automobile Co., Chicago.

Century Motor Vehicle Co., Syracuse.

B. F. Goodrich Co., Akron, O.

H. F. Borbein & Co., St. Louis.

Midgley Mfg. Co., Columbus, O.

New York Belting & Packing Co., New York.

Diamond Rubber Co., Akron, O.

Veeder Mfg. Co., Hartford, Conn.

H. C. Mueller, Milwaukee.

George D. Garland, Chicago.

Empire Motor Works, Buffalo.

Munger Vehicle Tire Co., New Brunswick, N. J.

Gray & Davis, Amesbury, Mass.

Moffett Vehicle Bearing Co., Chicago.

Badger Brass Co., Kenosha, Wis.

Liberty Bell Co., Bristol, Conn.

Kelly Handle Bar Co., Cleveland.

American Roller Bearing Co., Boston.

Brown-Lipe Gear Co., Syracuse.

Peter Forg, Somerville, Mass.

Gong Bell Co., Bristol, Conn.

Crest Mfg. Co., Cambridgeport, Mass.

Clark Bros. Co., Vicksburg, Mich.

American Steel & Wire Co., Chicago.

Adams Co., Dubuque, Ia.

Great Western Mfg. Co., La Porte, Ind.

Locke Regulator Co., Salem, Mass.

P. J. Dasey & Co., Chicago.

Hewitt-Lindstrom Motor Vehicle Co., Chicago.

Baldwin Automobile Chain Co., Worcester, Mass.

Penn. Automobile & Gear Co., Reading.

Brennan Mfg. Co., Syracuse.

This list is by no means complete. The management is in correspondence with a dozen makers of automobiles and twice as many makers of parts and accessories, most of whom will take space before the list closes.



Thanks to the courtesy of Commissioner Donald the Central Passenger Association and the Southeastern Passenger Association have granted a reduced rate to all visitors from the territory they cover. This is shown on the accompanying map, and is indicated by the white space. The details of the arrangements and the conditions under which the concession has been granted are as follows:

First.—Each person must purchase a first-class ticket to Chicago, for which he will pay the regular fare. Upon request the ticket agent at the starting point will issue a certificate of purchase, which certificate the purchaser of the



Territory in Which There Are Reduced Rates  
ticket will be required to sign in the presence of the agent.

Second.—If a through ticket cannot be procured at the starting point purchase to the nearest point at which a through ticket can be obtained and then purchase another ticket, taking a certificate from the ticket agent at each point.

Third.—This certificate must be presented to the special agent of the railroad associations, who will have an office at the Coliseum. It will be endorsed by him, stating that the holder has been in attendance at the show. This certificate, when presented to the ticket agent at Chicago, will enable the holder to purchase a return ticket at one-third of the regular rate. The certificates are

not transferable and the holder will be required to sign it before the return ticket will be issued.

Fourth.—Tickets to Chicago must be purchased not more than three days before the opening of the show, that is to say, not earlier than March 20, nor more than two after its opening—March 25—and will be available for a continuous journey only. Certificates will not be honored unless presented within three days after the close of the show, exclusive of Sunday.

Fifth.—Under no circumstances will there be any refund of fare because of the failure of the visitor to procure a certificate. Nor will certificates be honored by conductors. Ticket agents only will recognize them.

The management has guaranteed that there shall be no improper use of the privileges extended and has undertaken to make good any loss occasioned by the sale of certificates.

Passengers from points outside of the territory of the Central and Southeastern associations can, by parties of ten or more persons traveling on a single ticket, secure the party rate of two cents per mile per capita granted by the roads in the Trunk Line Association and the New England Association, to the nearest point in the territory in which the reduced rate is obtainable. This rate is equal to one and one-third of the normal fares in both directions. Tickets may then be taken from the nearest point in which the above reduced rate applies, the passenger thus obtaining the benefit of the reduced rate for the entire journey.



The attendance of visitors from out of town will be the largest on record. This statement is made with a clear understanding of what it means. No effort has been spared to educate the trade up to the importance of the event and the management has received hundreds of communications asking for supplies of the Weekly Bulletin, which has been issued for the last two months, and which furnishes information as to the progress of events as they develop.

The shows held under the same management in days gone by became famous

for the number of dealers they attracted. History will repeat itself. With the best lists of interested persons in the country at its disposal the management has had no trouble in placing before them all the details of the event.



One of the features of the show will be the largest indoor track in America on which vehicles will be in motion from early morning until the close of the show each evening. The manufacturers will have assistants to operate these vehicles and will extend an invitation to all who care to ride and learn to operate the automobiles. This has proven one of the most enjoyable features of past shows and the visitors have taken great delight in learning all they could of the methods of operation. From an educational standpoint this will, no doubt, prove the attraction of the show. The track will be twenty feet wide and make the complete circuit of the building.

The Chicago public will be given its first experience with motor bicycles. Not less than three and probably six different makes will be at the show and will be placed at the disposal of riders for trial. The makers are confident of making many converts and of proving to all that their machines are as easy to operate as bicycles of the ordinary pattern.



The automobiles will include everything from the lordly steam truck—the largest, by the way, ever shown in this country, and as large as any shown in Europe—down to the handsome little runabout in all sorts of styles. There will be great rivalry between some of the makers of electrics who will show busses to carry twenty people and other vehicles with capacities varying from that number down to the comfortable dos-a-dos. The largest exhibitors in that line will probably be the National Automobile & Electric Co. which will show fifteen styles, the Electric Vehicle Co., backed by the Elkins-Whitney-Widener syndicate's millions, the Woods company of Chicago, and the Scott Automobile Co. of St. Louis.

Many of the exhibitors have arranged for electrical displays. The building is one of the best lighted structures in the world, but the booths will be made attractive by electrical signs and other features. The arrangements for these matters are in the hands of the Chase Electric Sign Co., of Chicago, and current will be furnished by the owners of the Coliseum from their own plant at a nominal figure.

The Mobile Co. has placed an order for one of the best things in this line and will also make an electrical display during the evenings at its store on Wabash avenue. The Mobile Co. has also arranged to run a line of vehicles from its store to the building and will carry its friends and as many of the public as the vehicles will accommodate, without charge.



Contrary to the custom of other promoters the management will provide suitable accommodation for several of the automobile journals without charge. Some of the papers have undertaken to fit up booths and to thus add to the general attractiveness of the building. Each of the leading papers will send at least two representatives and some of them will be represented by twice that number.

The morning sessions will be for the trade exclusively. Dealers and manufacturers will be admitted on presentation of their cards at the bureau of information.

This is what the National company has to say about its display: "We expect, as a large western concern, to give the show proper support. We expect to bring a very handsome exhibit of from twelve to fifteen vehicles and to fix our space up in good shape."



A representative of one of the eastern automobile journals who was in Chicago Saturday assured the Motor Age that he hears the Chicago show talked of wherever he goes. He had just come from Cleveland and Toledo and there found that practically all of the people in the industry are preparing to visit the show. The business manager of one

of the other papers writes as follows: "I have been calling on all the manufacturers in New England for the last ten days and find them all talking about the show. Some of them will leave Thursday, some Friday and some Saturday, but they will all be there."

The department of publicity of the Pan-American Exposition has applied for and has obtained a space at the show from which to issue literature and other things calculated to advertise the big event. There will be attendants ready to furnish information desired by trade people and others. The people in charge of the press bureau of the Buffalo event have not, up to this time, given as much attention to the automobile as the subject deserves, although the exhibit will be one of the most important of the exposition. The application for space at Chicago indicates that more attention will be given to the subject hereafter.

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Here are a few opinions expressed by exhibitors about the invitation night:

"We think your idea of issuing tickets for a private inspection on Friday night is an excellent one. We will arrange to have our exhibit in shape."—Knox Automobile Co.

"We can have our display ready in time. The scheme is an excellent one. We are confident you are going to have a thoroughly successful show."—Patee Bicycle Co.

"We know no reason why we cannot be ready on time. Good idea."—Moffett Vehicle Bearing Co.

"We shall be glad to have our exhibit ready by the time you mention."—Woods Motor Vehicle Co.

"Your scheme of having an inspection of exhibits is a very good one and will undoubtedly do a great deal toward selling carriages. There will be no trouble about our getting our display ready by six o'clock on Friday."—Mobile Co. of America.

"We can see no reason why we cannot have our exhibit ready. We think the plan is excellent."—Badger Brass Co.

"So far as we are concerned go ahead with the plan, which strikes us as being an excellent one."—National Automobile & Electric Co.

"We believe the show will be of great benefit to the public as well as dealers, and wish success for the venture."—Chicago Automobile Repair Co.

"We shall exhibit a sample of our equalizing gears, and shall have them in ample time so that the exhibit may be ready by 6 o'clock Friday."—Brown-Lipe Gear Co.

"Your scheme of mailing out a number of engraved invitations for a private inspection is a good one. We will be on hand and all fixed up in good shape in time."—Milwaukee Automobile Co.

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The plan seems to have met with the general approval of the exhibitors and will do much to advertise the show locally. Exhibitors are invited to send in the names of persons to whom they would like to have invitations addressed. The management will, if desired, include in the invitation an intimation that it was issued at the request of the exhibitor.

The Victoria Hotel has been selected as the headquarters of the show. The Victoria is located at the foot of Van Buren street, facing the lake and is one of the most convenient in the city. Rooms will be set apart by the management for the use of the trade. Automobile literature will be provided and the rooms will be available for appointments with dealers and for business purposes generally.

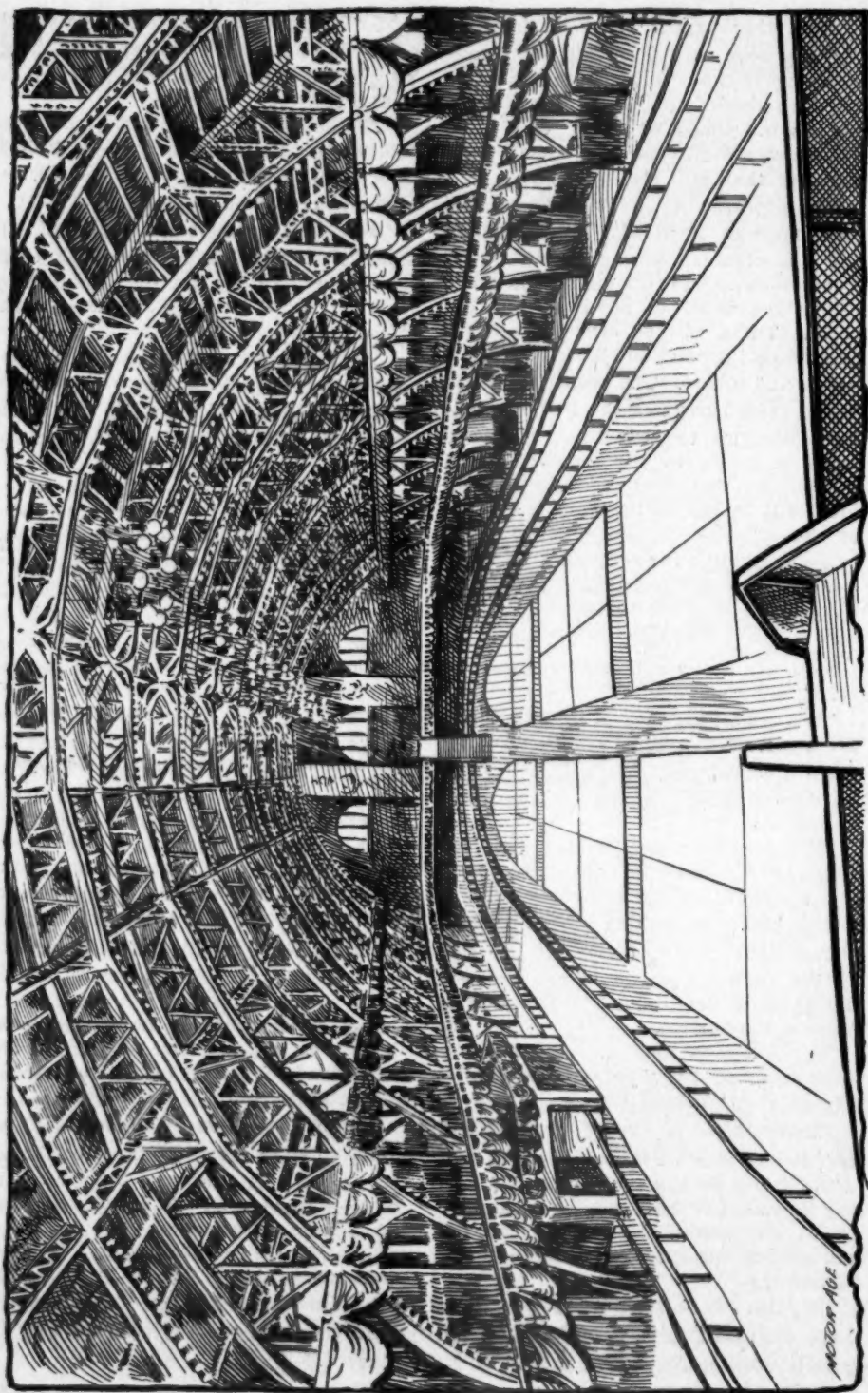
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A. A. Hansen, one of the veteran cycle dealers at Minneapolis, writes that he will attend the Chicago show in company with others from the same section.

George H. Bowler, who deals extensively in machinery, will be at the show. Mr. Bowler is the man who recently made a number of big purchases from the American Bicycle Co.

The Fisk Rubber Co. writes: "We understand prospects are very promising for an extremely successful show and certainly trust the expectations may be realized."





THE INTERIOR OF THE COLISEUM, PREPARED FOR THE AUTOMOBILE SHOW.

NOTOR AVE

# THE MOTOR AGE

## FOR AND ABOUT CLUB MEN.

**N**EW YORK, March 2.—Tuesday has been set apart as club night by the Automobile Club of America. The inauguration of the series brought out a large attendance this week. The special feature of the evening was an informal two-hour talk by J. A. Kingman of the Locomobile Co. of America on the care and handling of steam vehicles. Not only was he armed with large drawings for illustration, but he had the actual parts of a steam vehicle at hand for reference.

The members were thus treated to the clearest sort of an exposition, and showed their interest by a continuous series of interrogatory interruptions. Later Mr. Field will treat of the care and handling of gasoline vehicles, and Mr. Riker of electrica.

F. W. Tousey, the working secretary of the Automobile Club of America, has been stricken with pneumonia and was sent to a private room in a hospital by the club. At one time this week his condition was very serious, but he is now happily considered out of danger. His illness was inopportune at this time, as he was very busy with clubhouse matters and preparations for the big Buffalo run. Mr. Tousey's illness will also probably prevent his being in Chicago in charge of the track events at the Coliseum show, for which at the time negotiations were in progress.

In a recent conversation with a Motor

Age man, Chairman C. J. Field, of the technical committee of the club, said the rules for the classification of vehicles in the endurance test, which will be a part of the club's great run to Buffalo in September, had not finally been fixed. Medals, however, will doubtless, he says, be given to those making a good showing, but he was not able to say to what extent the tests would be competitive or whether the medals would be awarded by classes.

### GRAPHICAL PROOFS FOR LEGISLATORS

Albany, N. Y., March 2.—The National Association of Automobile Manufacturers and the Automobile Club of America were represented at the hearing here on Wednesday before the assembly committee on internal affairs, which has under consideration the bills introduced by Assemblymen Doughty and Smith, giving the various county boards of supervisors power to pass ordinances regulating the speed of vehicles on the public highways. This legislation was aimed particularly at automobiles.

The manufacturers' association was represented by a committee consisting of its president, S. T. Davis, Jr., of the Locomobile Co. of America, and Messrs. Field, of the DeDion-Bouton Motorette Co.; Mr. Turner, of the Automobile Co. of America; Mr. Freer, of the Daimler company, and Mr. Niles, its attorney. President Albert R. Shattuck represented the Automobile Co. of America.

Messrs. Shattuck, Davis and Turner were the principal speakers in behalf of



the automobile makers and users. They declared that they were not opposed to the passage of some law on the subject, but they thought that such a law should be uniform all over the state, that an automobilist on tour might know just what was expected of him, and not be in constant trouble through infractions of widely diversified ordinances.

The speakers urged that, after all, speed had far less to do with the danger than the legislators imagined, and that the most effective regulation would be in the direction of requiring chauffeurs to give ample warning of their approach, and compelling them to stop at the signal of an approaching driver of a horse.

When the question of speed and the control of automobiles came up, the committees were ready with an object lesson at hand. Outside they had four or five motor vehicles of different types, and the assembly committeemen were taken out and given rides. They were shown how easily the automobiles could be handled, and how, at a very high rate of speed, the vehicles could be stopped within a remarkably short distance. In this object lesson the chauffeurs embraced the chance to have a little fun with the legislators from the remote districts, and have some funny stories to tell about them.

The result of all this argument and exposition was that the assembly committee was pretty well persuaded that an act framed along the lines suggested would be a reasonable and effective law. A uniform speed limit of ten miles an hour in cities and fifteen miles an hour in the country, with regulations as to chauffeurs stopping on being warned by horsemen, was practically agreed upon, though there is to be another hearing next Tuesday or Wednesday.

#### BUFFALO PLANS FORMULATING

New York, March 2.—Following the arrival of the great A. C. of A. run to Buffalo, there will be an entire week, September 16 to 23 inclusive, devoted to automobile sports at the Pan-American

Exposition. There will probably be floral parades, motor vehicle races in the Stadium, obstacle races, hill-climbing contests, and tests of all kinds.

The Automobile Club of America has appointed a special committee, of which A. C. Bostwick is chairman, to co-operate with the sports committee of the Pan-American exposition. The outcome of a conference of these committees is the program roughly outlined above. It is proposed to ask the city's sanction of a race over the paved boulevard from the center of the city to the exposition's gates, and a great 200-mile international road race over the famous Erie-Buffalo course is among the possibilities in contemplation.

#### THE SOUTHERN FRANCE RACES

Paris, Feb. 18.—The final and most important race of the events conducted in southern France and known as the week of Pau, occurred yesterday over a road race course of about 205 miles. The race was divided into three classes, the second of which was again subdivided.

The first division of the race was a speed contest for all kinds of vehicles weighing over 1,430 pounds, and was captioned the grand prize of Pau. It was won by Maurice Farman with a 24-horsepower Panhard-Levassor, in 4:28:10, an average speed of 74 kilometers per hour. This time is much faster than that made last year by De Nnleff. The prize was \$600.

The second division was for voiturettes only, subdivided into two classes, the first for vehicles seating two persons and the second for vehicles seating but one. The first class was won by Henry Farman with a light Darracq vehicle in 5:24:19. The second class was won by Louis Renault with a Renault vehicle with De Dion motor. His time was 6:25:10.

The third division of the race was for motorcycles and was won by Osmond on a De Dion-Bouton 8-horsepower tricycle in 5:24:35. Goste and Beconnais were second and third respectively.

The German who created such a sensation by showing up in a 38-horsepower

marvel, failed to make good his promises of success.

#### WHAT THE MAYORS SAY

Washington, March 2.—The district commissioners are still wrestling with the problem of identifying chauffeurs who speed their machines beyond the maximum limit prescribed by law—twelve miles an hour. With a view of obtaining information relative to the police regulations affecting the operation of motor vehicles in vogue in the large cities throughout the country, the commissioners recently sent a circular letter to the mayors of the different cities asking them for full and complete information on the subject. Replies are coming in every day and they tend to show that very little has been done officially in the various cities of the country to place regulations upon the speed of motor vehicles. A summary of the replies received may not be without general interest at this time.

Mayor Van Wyck, of New York, writes that the question has been referred to the police department of that city, and that it is still under consideration.

According to Mayor Ashbridge, no official action has been taken relative to automobiles in Philadelphia.

The introduction of automobiles into the streets of Boston has not given much trouble, according to the chairman of the police board. The horses used in the hub seem to have become speedily accustomed to them, and the only thing which has given the police board any anxiety was the fact that the operators of motor vehicles proceed at a greater rate of speed than horses go. The board attributes this rather to inexperience in handling the machines than to willful disobedience of the law. It is further stated that the board would be glad to hear whether experience in Washington coincides with that of Boston. It appears that under the regulations of that city motor vehicles are under the same regulations as carriages drawn by horses.

The mayor of Indianapolis informs the commissioners that the use of automobiles in that city has not been so general as to attract attention to legisla-

tion along the lines suggested in this city. Such vehicles, however, are subject to a license fee of \$3 per annum.

The city of Cincinnati has a specific ordinance upon the subject. It specifies that all motor vehicles shall carry a lighted lantern after sunset and before sunrise. The speed is limited to eight miles an hour, and it is stipulated that two automobiles shall not be operated abreast upon any street of that city. Penalty for the violation of any of the regulations of the ordinance is punishable with a fine of \$5 and the costs of the prosecution.

While motor vehicles have been in operation in Detroit for some time, the mayor of that city states that their use has not yet become so common as to call the attention of the public to the need of legislation. He states further that he cannot recall any accident in Detroit due to the automobile.

According to the mayor of Buffalo no official action has been taken in the matter in that city, the automobile being under the same regulations as the horse-drawn carriage and the bicycle.

The secretary of state has forwarded the regulations in force in various European cities, which were furnished by United States consuls, and which have been published in the Motor Age from time to time.

#### REAL WISDOM DISPLAYED

The Solons of South Carolina, now sitting in serious session, are not to be left behind by other state legislators who are fixing up automobile regulations, and so they are considering the following extremely ingenious measure which, being incomparable, cannot be criticised:

"Section 1.—Be it enacted by the general assembly of the state of South Carolina: That from and after the approval of this act it shall be unlawful for any person to ride or drive any horse or mule or bicycle or locomobile or automobile upon any street or alley in any city or town or highway of this state in a wilfully careless and reckless manner.

"Sec. 2.—Any person convicted of violation of the foregoing section shall be

punished by fine not exceeding one hundred dollars, or by punishment not exceeding thirty days."

Now just fancy an automobilist arguing with a local magistrate as to what does and does not constitute "reckless" driving of mules and automobiles! The South Carolina law makers are either a lazy sort or have great faith in the prudence, wisdom and equity of their executive constituents.

#### WASHINGTON CLUB ELECTS OFFICERS

Washington, March 1.—The National Capital Automobile Club met Wednesday afternoon at the office of General Miles, in the war department building, and received the report of the committee on nominations. The committee recommended the election of the following officers, which action was taken: President, Gen. Nelson A. Miles; vice-presidents, F. C. Stevens, Congressman J. C. Sibley and Clarence F. Norment; secretary, W. J. Foss; treasurer, Dr. J. A. Aspinwall; board of governors, Col. Henry A. May, Dr. Flint, Hon. Davis Elkins, Rev. Dr. Prescott and Clarence Moore. Lieut. Ward of the navy will be elected one of the vice-presidents at the next regular meeting.

The local organization starts on its career auspiciously, the membership comprising many of the most influential men in Washington, and it is believed the club will be able to correct a number of abuses to which motorists are now subjected. Pending the selection of suitable quarters, the meetings will be held in General Miles' office.

#### SPORTING BLOOD AWAKENED

Philadelphia, March 4.—With the advent of spring weather local chauffeurs have commenced surreptitious speed trials over the Camden-Atlantic City course with a view to getting a line on the capabilities of their machines before challenging the present holder of the record over that route, "Bob" McCurdy. Young as the season is, there are already rumors of an intention on the part of the authorities of the various towns and villages along the route to

put a stop to fast motoring, and especially on Sunday—for the Sabbath day seems to be favored by the Quaker auto-fans for speed trials. It is dollars to doughnuts that any regularly organized contest over the route will meet with the decided opposition of the Jersey Selectmen, for even in the palmy days of bicycle record making and breaking over the course they evinced great activity in putting a stop to the game, which was naturally confined to Sunday, owing to the inability of the "hot dogs" to neglect their businesses during the week. Indeed, in late years very few races were pulled off over the course, and those few were arranged sub rosa and the details kept out of the papers.

It is unfortunate that the Atlantic City route is the only one hereabouts which is suitable in all respects for fast work with self-propelled vehicles. There are, perhaps, better-surfaced roads running out of Philadelphia, but they are shorter, more hilly, with numerous turns and traverse a territory much more thickly populated. The Atlantic City route is very nearly a bee line from the Delaware to the ocean, and it is possible for the operator to see ahead for miles over the level and comparatively smooth highway laid down as the crow flies across the Jersey barrens.

#### WOULD-BE SOLAR PLEXUS BLOW

Berlin, Feb. 16.—During the hearing of a case against the driver of an automobile at one of our chief metropolitan law courts, the public prosecutor gave vent to the remarkable sentence that "automobiles did not possess any right of existing in the streets of Berlin." This, coming from a man so high in authority, is doubly provoking and has given rise to a great deal of ill-will in automobilistic circles.

The linking together of good eatables and automobiles at the food show to be held at Atlantic City, N. J., commencing April 1, includes the feature of automobile racing, which will take the form of three 10-mile road races for steam, electric and gasoline vehicles, respectively.

There will also be a free-for-all 20-mile race open to any road wagon seating two persons.

Automobile license fees in Pittsburg are as follows: Six dollars for a single seated vehicle; \$10 for a two seated vehicle, and \$12 for larger machines. An additional fee of 20 cents per month is also charged.

Only one motor vehicle accident in four months can be chronicled in Vienna, but this one accident unfortunately ended in the death of one of the parties concerned, a cabman, who collided with a motor and was thrown from the box by the impetus of the collision.

Reports from Dawson City say that the stage line recently started between that city and Grand Forks has so far been quite successful, contrary to the expectations of some of the people who predicted failure. The trips have been made in good time and on schedule.

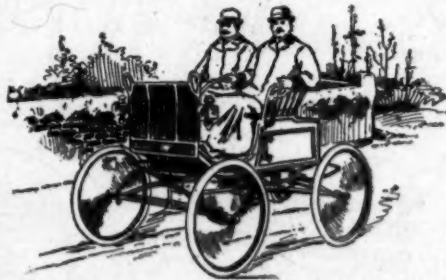
The Automobile Club of France and the Automobile Club of Germany have finally set the date for the big Paris-Berlin road race. The vehicles of the touring class will start June 25, and the racing vehicles two days later, the start being made from Paris. Stops will be made at Aachen and Hanover, and

the arrival in Berlin will be on the 29th. This event is under the patronage of the German emperor, who has donated \$10,000 toward the prize fund.

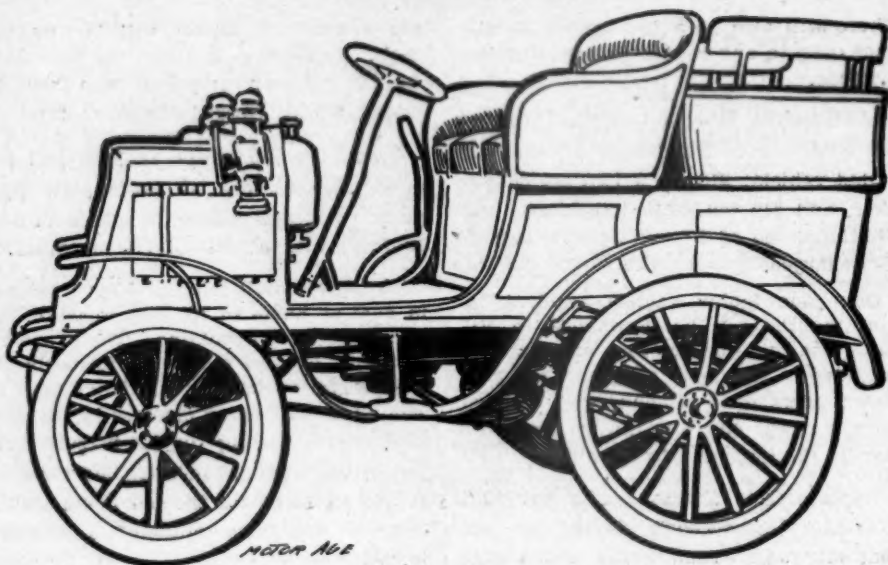
There are 750 motor vehicles and 340 motorcycles in use at present in Belgium. Brussels leads the cities of the country, with a total of 170 machines.

The Automobile Club of New England is now at home in its new quarters on Newton street, Brookline. The property occupied by the club was formerly in the possession of the Suburban Club. It has undergone many changes in the process of remodeling for its present purposes, and among other transformations is the alteration of the old horse stable into a first-class automobile storage house.

The gasoline vehicle of a Brooklyn, N. Y., inventor was recently given an exhaustive test on Long Island roads by members of the Long Island Automobile Club, and showed gratifying economy of operation. The total run of 63½ miles was made in a running time of 5 hours 12 minutes, with a consumption of only 4½ gallons of gasoline. This, at 14 cents per gallon, makes the total cost of the run 63 cents, or a cent a mile for four passengers.







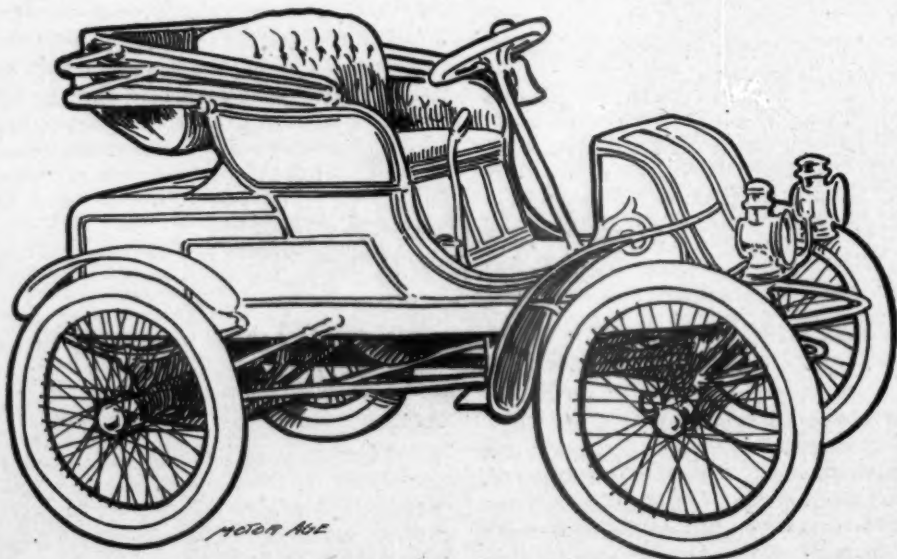
A FRENCH TYPE OF HYDRO-CARBON CARRIAGE

## THE TRANS-OCEANIC DIFFERENCE IN AUTOMOBILE DESIGN

**I**T CAN be said that there is a French type of motor vehicle. It cannot be said that there is an American type. American vehicles are easily recognizable because they each and everyone possess certain characteristics in design which are peculiarly American. But type, with reference to America, means

only the division of vehicles according to their source of power—steam, electric or gasoline.

The French type of hydrocarbon vehicle of medium weight is essentially like that shown in the upper illustration. The motor is in front, and back of the driver's seat is either a pair of facing seats



AN AMERICAN TYPE OF HYDRO-CARBON CARRIAGE



or a single crosswise seat. Both of these characteristics which typify the French vehicle are missing in all but a very few American machines, which have the motors in the rear and are without the rear seats, except they are regular surreys or have rumbles for the allmighty "tiger" behind.

In addition to these points it is noticeable that American manufacturers have followed rather closely the lines of horse drawn carriages of standard patterns, while French and other European

makers have to a greater extent marked out their own models.

There is a tendency in some quarters here to copy French models, especially in light vehicles. It is not altogether impossible that vehicles similar to that shown in the first illustration and having the motor in front will soon appear, for already at least two makers have begun to make motor front running gears, and the introduction of a few French vehicles of the kind shown may lead to the incorporation of the rear seat idea.

## PROSPERITY PROMISED AT PLATTSBURG

**T**HE LOZIERs never did things by halves. It was always neck or nothing with H. A. Lozier and it was generally neck. The great plant at Toledo, undoubtedly the most modern of all bicycle plants up to the time it was erected, was a radical departure in bicycle factory building. It was operated by electric power, each department being entirely independent of the other, and that meant the saving of much tear and wear. It was a new idea at that time.

The master mind that planned the building was not a gentleman with mystic letters after his name, for it was planned by Geo. A. Burwell, the superintendent, who is also responsible for the immense plant now nearing completion for the Lozier people at Plattsburg, N. Y. Westfield, Mass., and Thompsonville, Conn., are additional examples of Lozier thoroughness and ability to tackle and complete big things, and let it be whispered, make plenty of money out of them.

The big guns in the bicycle business had to take Lozier into reckoning at every stage of the bicycle business. It will be remembered that he suddenly, a few years ago, erected two immense steel tube plants in Pennsylvania and was soon selling his competitors tubing, which was ammunition for his guns so to speak.

The company had quite a boat building

and motor plant in Ohio, but Mr. Lozier wanted to go into the motor making and boat making just as he went into the bicycle business, and he will probably be as great a factor in his new field as he was in the old.

It is well known that Mr. Lozier got a lot of cash when the consolidation of the bicycle industry came along and the so-called trust was formed. They could not form a trust without Lozier's three plants and the immense amount of cash received for the interests is now being used in other directions. A good deal of it, half a million it is said, will be poured into Plattsburg and the works which are located in that beautiful little city.

There was a good reason for going to Plattsburg. It is only a two hours' run from Montreal on the Delaware & Hudson R. R., and such considerations as abundant water power, moderate price of land and good shipping facilities by water and rail decided the Lozier Motor Co. to locate on Lake Champlain.

A Motor Age man had promised E. R. Lozier, the vice-president, treasurer and manager of the concern, that he would visit Plattsburg if the snow were not too deep and his snow shoes were in good order, so last week the writer made up his mind to take the six hours' ride on the D. & H. R. R. from Albany to Plattsburg. Fortunately, on changing trains, he met the gentleman referred to, who was re-

turning from a trip to Cleveland, Detroit and Ohio points.

Next day a sleigh ride was taken to what is known as the Lozier farm on the outskirts of the town, where the immense boat building house, which was completed last fall, and the equally large motor works only partially completed are situated. The boat building plant is within fifty yards of the lake, which furnishes an excellent harbor and is protected by a costly break-water, erected by the railroad company some time ago. This will give the Lozier people comparatively smooth water even when a storm is raging outside.



To show how rapid is the march of improvement it is only necessary to say that the space between the boat plant and the lake will be streaked with electric roads. Boats will run on specially constructed cars to the water's edge and out on a pier, lowered with electric cranes, and in a minute or two be in the water, all being done practically without manual labor. The boats, after being tested, will be hoisted back on the electric tracks, returned to the boat house, which will be complete with rails and switches, and will glide into their places without a hand being put to them. Around the immense structure, which looks something like the pictures of an exposition building, is an electric crane railroad for lifting purposes. The entire plant, including the motor and the great dam from which the electric power will be drawn, were designed by Mr. Burwell.



The motor plant is larger than the Lozier Toledo factory and is only half the size it will be later on when an exact counterpart of the present structure will be built as an extension. The building of the present half at this time is due to a desire to commence turning out goods in volume rather than wait for the building of the complete plant. The building will be brick and iron, and will be thoroughly fire-proof, as the company will not carry any insurance. The floor will be of cement covered with a thin layer of board as a protection

for tools that might fall from the hands of the workmen.

The reason that the place is called a farm is because it was a farm, and a stone house and the barns still stand. It is said that Mr. Lozier intends to cut up the greater part of the farm into building lots so that his workmen can buy land at a reasonable price and put up their own houses.



During the afternoon Mr. Lozier drove the Motor Age man to Mr. Burwell's office, which is located at present in the Wellington typewriter factory, where he is busy turning out Lozier marine motors, but expects soon to move into the new plant. Mr. Burwell is the same modest, jovial soul he was when superintendent of the Union bicycle factory, of Highlandville, Mass., and he, like other old Lozier employees, has stuck to the great organizer of Cleveland and his bank account is said to be quite robust through that connection. Mr. Burwell probably had no peer in bicycle construction, and the Lozier marine motor is confidently expected to soon win permanent fame just as did the Cleveland. As a boat builder Mr. Burwell does not claim to shine, but he is a pretty good hand at sailing one as he made the trip from Toledo to Plattsburg, some 900 miles, by way of Buffalo, last year, catching the tail end of the storm that wrecked Galveston; but he came through without mishap.

During the day E. R. Lozier (who is the youngest son of Mr. Lozier, a Cornell boy, and duplicate of the father in every respect) took the writer out to the Lozier dam, which is three miles out of town on the Saranac river. Here a scene of the utmost activity prevailed, a hundred men being employed erecting the plant and cutting out a new river bed for the waste water flow after it has passed the turbine wheels that will generate the 1,500 horsepower of electricity, 500 of which will be used to run the Lozier Motor Co.'s plants, and the remainder of which will be for sale to manufacturers and others. It is stated that Mr. Lozier can cut the average price of electric horsepower in two and then

make a fair price on his investment. This will certainly induce manufacturers to locate in Plattsburg.

The erection of this plant for electricity making is a stupendous undertaking at this time of the year, but there is no let-up in the work although zero weather prevails.

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Plattsburg, as is well known, is quite a summer resort, the immense Hotel Champlain being located three miles away and reached by electric cars. The advertising that the Lozier motor will give Plattsburg will be of the utmost value to the city, which seems to be more progressive than the usual city or town of its size, the population being only 8,000. Two daily papers, one being published in the morning and the other

in the afternoon, testify as to the progressiveness of the people.

E. R. Lozier has become thoroughly at home in Plattsburg and the first words he said to the writer at Albany were that he was glad to get home, and when he arrived at Plattsburg the young people welcomed him as the father in the Bible was said to have welcomed the prodigal son. Mr. Lozier is a keen business man and with Mr. Burwell on the mechanical end, there is no use prophesying anything but success for this concern.

The writer does not go into the details of the company's product as the new catalogue, which will be out in March, will tell all about it. Many of the old Lozier people are with the company at Plattsburg.

## FRESH NEWS OF THE INDUSTRY

ON THE eve of the formation of a big company to operate electric cabs, busses and other vehicles for the accommodation of the Chicago public and at a time when the Woods company has commenced to make a favorable showing as a result of the operation of its cabs, comes the announcement that the Illinois Electric Vehicle Co. has decided to withdraw all its vehicles from the streets and abandon the field until such time as Chicago possesses streets which will entitle it to rank as a city of civilized people.

The Illinois company commenced business in Chicago two years ago and has lately been operating 100 cabs. Owing to the abominable streets with which the city is cursed by its city fathers it has been a too difficult task to keep the vehicles in repair. There has been little or no pleasure to passengers in the use of them for the same reason, and so it was decided on Monday, at a meeting of the directors, to recommend to the stock-

holders at their annual meeting on April 6, that the service be discontinued.

Chicagoans will have the questionable pleasure and the city administration the disgrace of a backward step. While other cities are constantly improving their service Chicago will return, so far as the Illinois Electric Vehicle Co. is concerned, to the primitive horse-drawn cab of antediluvian design.

The directors of the company are John J. Mitchell, Robert T. Lincoln, C. K. G. Billings, E. L. Brewster, Levy Mayer, Samuel Insull, C. F. Kimball, James S. Hayes, P. A. B. Widener, Martin Maloney, Harry Payne Whitney. Samuel Insull, president of the Edison company, is the president of the company.

The company's capital stock is \$2,500,000. About a year ago it purchased the leasehold of Leroy Payne, on Michigan avenue. It has stations on North State street and Cottage Grove avenue and employs about 200 men.

Director Mitchell expressed his senti-



ments freely on Monday. "Chicago," he said, "has become a city hardly trying to live in, much less run autocabs. The condition of the streets is such that continuous repairs are necessary."

For the present the Woods Motor Vehicle Co. will have a monopoly of the electric cab business in the city. The number of cabs operated by the company is constantly increasing and Motor Age was told by President Allison recently that the balance sheet had shown steady improvement for several months.

The retirement of the Illinois company will be deeply regretted by everyone connected with the automobile industry regardless of the power employed, for its effect on the industry as a whole cannot fall to be, to some extent, injurious. The fact that the retirement became necessary by reason of the filthy condition of the quagmires called, by courtesy, streets, will not be given due weight. Other cities, notably New York, Philadelphia and Washington, have made a success of the electric cab service.

Although Chicago has a few of the most ardent road improvement advocates in the country they have been unable to accomplish much in the line of local improvement. They have not received the encouragement of the people who should be most interested in the subject. Discussing the action of the Illinois company, one of the officers of the Associated Cycling Clubs of Chicago, a body of men who have done a lot of good without satisfactory results, said to a Motor Age man:

"If the automobile people do no more than they have done up to now Chicago will never owe any improvements to their efforts. They not only initiate nothing, but do not seem disposed to lend assistance to the work done by other people.

"About a year ago our association decided to ask the trustees of the drainage canal to build a road along the canal from Western avenue to Lockport, a distance of about forty miles. A committee of three members was appointed of which one of the most active workers was chairman. The committee found a number of supporters among the trustees, notably

Messrs. Jones, Braden and Boldenweck, who promised to do the necessary work if they found that the movement received enough support to warrant it.

"All the local newspapers—every one of them—gave support to the plan. It was indorsed, first by the Republican county convention and then by the Democratic. Alderman Fowler introduced the matter in the city council and there also it was approved.

"The committee set about securing signatures to a petition and selected a member of the local automobile club as a likely man to assist in securing the support of users of motor vehicles. First the chairman sent him a circular letter. No reply. Then he wrote him a personal letter calling attention to the importance of the measure. Still no reply. A personal visit was next made. The interview was brief and unsatisfactory. The automobile enthusiast 'was too busy and would try to think about it at some other time.'

"Naturally we gave up the automobile club men after that and so far as we have been able to learn they have done no real work to this day. The measure was defeated, and probably would have been in any case, but I mention the incident to show how little disposed to do any efficient work are the people who would be most benefited by favorable action on any matter connected with the improvement of the local streets and outlying roads."

#### TO ESTABLISH HONOLULU AGENCY

San Francisco, March 2.—A local veterinary doctor remarked this week that although he had not been looking for any symptom of the kind, he felt sure that the automobile fever is contagious; that it is spreading not only from place to place here on the mainland, but even to islands out in the Pacific, 2,000 miles away.

At any rate, it is a fact known to the San Francisco trade that Honolulu horses that are about a great deal are no longer pricking their ears on meeting the automobile.

And yesterday it was learned by your

correspondent that E. H. Paris had arrived here this week from Honolulu, and that last evening he boarded an outgoing overland train with automobile and motor cycle business intent. Mr. Paris is secretary of the E. A. Hall & Son Co., prominent Hawaiian Islands dealers in hardware and bicycles, his present mission being to arrange for his house for the agency of the best line of automobiles and motorcycles he can find.

#### AKRON CLAIMS THE HONOR

The city of Akron, O., takes exception to recent statements that Hartford, Conn., is the first city to put into operation an automobile patrol wagon. Akron says further that it has had in actual use for over a year an electric patrol which was built under the supervision of the city electrical engineer. A good many parts of it were manufactured at the central fire engine house.

During the past month the streets of Akron were icy and slippery, but the electric patrol wagons climbed the steepest grades (which are very steep in Akron) without any trouble.

#### NEW YORK TRADE BREVITIES

K. Franklin Peterson, Chicago representative of the American and United States ball bearing companies, the Toledo and Standard tube companies, and the Baldwin Cycle Chain Co., was in town last week preparing for his exhibits at the Chicago show.

Fred S. Dickinson, of the Munger Vehicle Tire Co., ran up from New Brunswick, N. J., last week and made a round of trade calls. He reports large orders for the Munger tires and rapid progress toward filling them.

Several of the automobile companies controlling motors will before long be engaged in putting out motors for the launch trade. Already the Daimler launch business is a large part of its trade and the Hasbrouck Motor Co. has entered the field. C. J. Field, of the De Dion-Bouton Motorette Co., recently told a Motor Age man that his company only awaited the arrival of machinery and

plans from Paris to take up the cognate industry.

President R. Lindsey Coleman, of the American Bicycle Co., has been the past week on a tour of inspection of the factories controlled by the company. He is making a special study of the automobile situation, which may determine the manufacture or non-manufacture of certain vehicles, whose patents the A. B. C. now controls and which are now on the market.

The Automobile Manufacturing Co., of which Mr. Lurie is manager, has moved its plant from West street to 140th street and Mott avenue.

#### READY FOR BUSINESS SOON

The company which has been forming to operate an automobile omnibus system between the Illinois twin cities of Champaign and Urbana is now a definitely organized concern, having been incorporated as the Illinois Motor Transit Co. Its officers are as follows: President, Allen Williams; vice-president, John Armstrong; secretary, J. L. Armstrong; treasurer, J. T. Ainsworth; general superintendent, S. D. Enochs, and general manager, Dr. M. D. Williams. The directors are mainly the same parties. It is expected that the sixteen-passenger gasoline vehicles which are to be used will be ready for service inside of two months. The Chicago Motor Vehicle Co. of Chicago is building the carriages.

#### ATTACHES ACCOUNT OF \$53,000

The Goodyear Rubber Co.'s suit against the Consolidated Rubber Co. assumed a business-like aspect a few days ago, when the plaintiff company garnisheed an account of \$53,000 in the hands of the Columbus Buggy Co. The trouble between the two rubber houses is due, according to the allegations of the plaintiff, to the failure of the defendant to carry out a contract. An agreement was made between the Consolidated and other companies, under which the former agreed to take a certain number of tires from each, and, after



disposing of them, to buy such others as it needed from the sellers in certain proportions. The Goodyear company claims that the Consolidated did not carry out the latter provision, but gave to other companies more orders than properly fell to their share, by reason of which it was deprived of large sales and lost a big profit.

#### NEW ADJUSTABLE CHAIN COMPANY

E. A. Baldwin, inventor and patentee of the well known Baldwin adjustable chain, has formed the Adjustable Chain Co., of West Upton, Mass., to make automobile and cycle chains under his patents. Mr. Baldwin suggests that his long experience in chain making is a guarantee that chains made by the new company will be fully up to the standard in material and workmanship.

#### RECEIVERS' CERTIFICATES ISSUED

The Baldwin Automobile Co., whose financial troubles, said to be due to poor management to the time the present directors assumed control, were recently detailed by the press, evidently enjoys, under the new management, the confidence of the creditors. They have successfully petitioned the court to allow the receivers, one of whom is the president of the company, to issue receivers' certificates for \$12,500 wherewith to continue to run the business. This is the first case recorded in Pennsylvania in which such action has been permitted. The Baldwin works were only closed a few days. They have been running for the last month, and the directors believe they will shortly offer to the public a vehicle which will be entirely satisfactory.

#### NEW INCORPORATIONS

Toledo, O.—The Toledo Automobile Co., for \$25,000, to do a general motor vehicle livery business. Incorporators: Frank E. Southard, H. R. Felker, Charles M. Hall, E. G. Eager, Edward P. Hubbell and E. A. Kirk, mainly well known bicycle men.

Waltham, Mass.—The Waltham Auto-

mobile Co., for \$50,000, with \$40 paid in, under the laws of Maine, to manufacture and deal in merchandise, machines and automobiles.

New York.—The Auto Supply Co., for \$7,000, to manufacture automobiles.

Brookings, S. Dak.—The Mobile Tire Co., for \$150,000. Incorporators: Edward Nelson, Henry W. Boardman and George P. Hall.

#### ANOTHER STORAGE STATION READY

New York, Feb. 28,—Homan & Schultz, well known bicycle dealers, have established an automobile agency, storage station and repair shop on the corner of 100th street and Broadway. They have a two story brick building, which they claim is the first specially built building in the city for the business. They are the agents of the Locomobile Co. of America and of the Woods Motor Vehicle Co.

The building is 25 feet front by 100 feet deep. On the first floor are the offices, a handsomely furnished ladies room and storage space for twenty-five vehicles. Also on this floor are electric charging boards and a patent gasoline tank. An electric elevator runs to the cellar, where thirty carriages may be stored, and to the second floor, where there is a show room and repair shop fully equipped for gasoline, electric and steam vehicle works. The entire building is lighted by electricity.

In the accompanying illustration J. Foster Millikin is shown in front of the station in his new \$9,000 Panhard-Levasor racer.

The C. H. Larsen Co. has secured the Chicago agency for the Waltham Mfg. Co.'s goods and will soon have a run-about at its store.

The Philippine commission has forwarded to the war department the proposed customs tariff for the ports in the Philippine archipelago. The department invites suggestions and recommendations until April 15, which will be considered with a view to amendments before promulgation. The proposed law provides that automobiles for passengers and for

transportation of merchandise shall pay a duty of \$60 each.

E. Long, of Cedar Rapids, Ia., has designed and constructed a motor bicycle, the first seen in that part of the country.

In a recent article describing a visit to the Loomis Automobile Co.'s factory at Westfield, Mass., the Motor Age gave Mr. Loomis' first name as Frank. This was an error on the part of the writer. Gilbert Loomis is correct.

The price of the Overman steam vehicle has been increased from \$850 to \$1,000. This advance, Mr. Overman says, is due to the fact that improvements have been made which increase the cost of manufacture and because orders are coming in faster than the company can make the vehicles.

H. K. Clove, said to hail from Salt Lake City, is in Anderson, Ind., trying to organize a company to make a steam vehicle. According to the story told the people there, he has a compound engine and a chainless driving mechanism. He is said to be the owner of 200 patents, and to be desirous of organizing and starting a factory without delay.

His double may be found in every town where there are people willing to invest in the automobile industry, or where there is a bonus to be secured.

One of the Kenosha papers reports that one of the Jeffery vehicles has been completed and that the maker will shortly give employment to a large number of men. Mr. Jeffery recently advised Motor Age that he did not expect to have any vehicles ready for the market for some weeks.

The Motor Age is in a position to place a maker of automobiles in correspondence with a superintendent of vast experience and irreproachable character. The gentleman referred to is at present with a concern which is indisposed to give any great amount of prominence to the motor branch of its business.

The plan of the Long Island Traction Co., on which the company has been working for some months, to run a number of stage lines about Long Island, has been abandoned. The reason given is that the company failed to obtain franchises, but this is declared unnecessary by the local officials, who say there is nothing to prevent the company running all the stage lines it wants to.



J. FOSTER MILLIKIN'S PANHARD-LEVASSOR RACER  
IN FRONT OF HOMAN & SCHULZ'

# THE MOTOR AGE

## INFORMATION FOR BUILDERS AND BUYERS.

**A**MONG the new things which will be seen at the Chicago show will be a steam engine just produced by the Locke Regulator Co., of Salem, Mass. This engine, though of remarkably strong construction, weighs 60 pounds. It has V slides with large surfaces and can be adjusted to wear, but the makers feel warranted in stating that, owing to the fine workmanship used in assembling the parts, the engine will run a long time before any adjustment is necessary.

The engine is of the double action, re-

can be fitted if necessary. The shaft is made from a heavy steel casting, the frame of composition. The makers have tested their engine to  $4\frac{1}{2}$  horsepower. This engine, together with the other products of the company, will be shown in the gallery during the show.

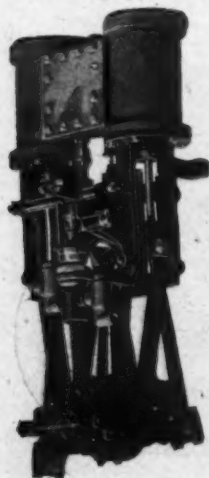
### FIXED FOR MORE BUSINESS

The International Electric Co., of New York city, has incorporated under New York state laws, with a paid-in capital of \$25,000, as the International Brass & Electric Co. With enlarged facilities it is now prepared, at 76 Beekman street, to take care of all kinds of demands for electrical specialties. For the automobile trade the company furnish binding posts, fine wire binding and small screw machine products of similar nature.

### TESTIMONIAL FROM CHINA

"Three in One" oil, the well known lubricant, cleaner, polisher and rust preventer made by the G. W. Cole Co., 141 Broadway, New York city, is as well and favorably known in other countries as it is in the United States. It is now sold in almost every country on the globe. Recently a large shipment was made to Australia. It has been introduced in other countries of the far East. It has been used in China for several years, as the following letter will attest:

"Shanghai, China.—G. W. Cole Co., Gentlemen:—We have used your "3 in



Locke Steam Engine

versible link modern style. The cylinders are  $2\frac{1}{2} \times 3\frac{1}{2}$ , and are arranged so that extra water and gasoline pumps

1" oil in considerable quantities for several years, and find it eminently satisfactory as a lubricant and rust preventer. We write this out of appreciation of what we consider the salvation of bicycles in this moist climate, viz., "3 in 1." We are, yours respectfully, International Bicycle Co."

#### READY FOR THE MOTOR

In addition to their already extensive business of supplying the trade with running gears and complete equipments for

fit in standard sizes as follows: Track width, 44 inches; wheel base, 56 inches; body, 22 inches by 56 inches; wire wheels with wood rims and heavy tandem tires, 28 inches by 1 $\frac{3}{4}$  inches. The set of three springs used is sufficiently strong to support the motor, etc., from the body.

#### PLENTY OF PICTURES

An extremely interesting catalogue has been issued by the Olds Motor Works, of Detroit, descriptive of the company's light gasoline runabout and electric car-



COVERT RUNABOUT READY FOR MOTOR

steam automobiles, Byron V. Covert & Co., of Lockport, N. Y., are now putting on the market a new, light weight, one-seated runabout, intended for small gasoline motors as the motive power. They are furnishing this rig complete, as shown in the accompanying illustration, with tires, spring, body, and steering device, the whole very nicely finished, for \$175. At this price the assembler can readily construct a complete rig at an expense not to exceed \$450.

There should surely be a good demand for a rig of this pattern, and the above concern, having recently made extensive additions to its factory, is now prepared to guarantee prompt deliveries on all of its standard goods and on the above out-

riages. The booklet is notable on account of the great number of illustrations showing the Oldsmobile in numerous poses calculated to elicit praise for its running and handling qualities and appearance. Several of the pictures from which the illustrations were made were used in the Motor Age a few issues past.

The excellence of the Loomis carburetor seems to have been proved to the entire satisfaction of the Crest Mfg. Co. A number of them have been sent out with the company's motors and have given such satisfaction that an order has just been placed for 250, to be followed, shortly, by another order for a large supply.



## From the Four Winds

**N**EW YORK, March 2.—One Walter S. Langerman has been having a peck of trouble putting two Panhard-Levassor automobiles through the U. S. custom house. His claim was that they had been in use a year and were household effects in the sense contemplated by the law, even if he should intend to sell them as second-hand vehicles in this country.

The New York Herald, which has lately been giving liberal space daily to automobile matters, had its Paris office interview Major William A. Williams, the treasury agent of the American consulate in Paris, and the cable report of his decision of the whole subject will be of great interest to all automobilists. It follows:

"Let us see for a moment what the circumstances are surrounding the manufacture, sale and shipment to the United States of these two automobiles, and the laws and regulations regarding the importation of this class of merchandise, when it is dutiable and when it is not. Here are the facts developed by investigation:

"Messrs. Panhard and Levassor, the manufacturers, sold the two automobiles, Nos. 1882 and 2372, last July, to M. Charron's firm.

"It seems they were used to a certain extent by members of the firm until January 30 last, when they were sold to Mr. Langerman, delivered to the freight department of the Compagnie Transatlantique, and forwarded to New York.

"Automobiles of foreign manufacture are dutiable under the customs laws like

any other merchandise, and under no circumstances are they free except on one condition, and that by the interpretation given by the appraising officers to article 504 of the tariff act of July 24, 1897.

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"Surely it is a very liberal construction of article 504 when it classifies an automobile as a 'household effect,' but, having been given this liberal construction, it is classified on entry, when free, by the regulations governing other household effects, to wit: that they must be actually used abroad by the owner, 'imported' for one year or more, and must not be intended for any other person or persons, nor for sale.

"The automobiles in question had been out of the manufactory only a few days over seven months and had been in possession of the importer less than twenty days.

"It is probably true that they were second hand and had been used by former owners, but that fact would not entitle them to free entry any more than it would other household effects bought within a year of the time of importation, and the fact that they were new, or old and used, does not entitle them to free entry unless the provisions of article 504 be fully complied with. The regular duty on automobiles is 45 per cent ad valorem.

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"If, as is asserted, these automobiles were second hand and had not been much used, they were probably purchased by the importer at a smaller price than that of new machines. This



being the case, if he had taken out a consular invoice, as the law requires for all merchandise imported valued at more than \$100, stating the price paid, time, place, and of whom purchased, there would have been no trouble in the importation, and the importer would have paid duties only on the actual foreign market value of automobiles at the time of shipment, which, under ordinary circumstances, is the actual price paid.

"The investigation disclosed:

"First, that Mr. Langerman declined to take out a consular invoice, although his attention was called to the matter by the shipping officers.

"Second, that he undertook to pass the automobiles as household articles that had been in his use for one year or more.

"Third, it is alleged that one or both of the automobiles were for sale, or, in other words, that Mr. Langerman was not the ultimate consignee.

"Fourth, if the intention of the importer was to defraud the revenue, then the merchandise was subject to seizure. This I believe to be the usual practice in most countries.

"In conclusion," said Major Williams, "I would gladly suggest, for the benefit of those who desire to export to the United States and are in doubt as to how to proceed, or as to the laws and regulations governing the importation of any particular class of merchandise, that if they will call on me at the American consulate every courtesy will be shown them.

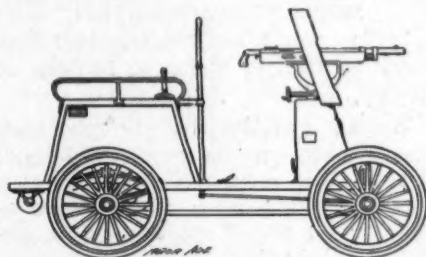
"It is not the desire of any officials to throw obstacles in the way of honest exportations to our own country. On the contrary, we take great pleasure in extending every courtesy possible consistent with official duties."

#### DAVIDSON TRIES AGAIN

Highland Park, Ill., March 2.—Editor Motor Age:—I mail you under separate cover a print of one of the two gun carriages I am building. You doubtless remember my unfortunate experience last summer, and, while my trouble was principally with the tire question, I have

decided to construct in our manual training shops at the academy two entirely new carriages, using steam as the motive power, and depending upon no one firm to build the carriages complete, as I believe no one firm has the best of everything. I am now selecting what I consider, after careful investigation, the greatest improvements from all over the country, and I believe that when my carriages are completed the last of April, I shall have a combination of ideas that cannot be beaten.

I expect to start with these two carriages in June for Washington, taking the southern route through Indianapolis, Columbus and over the mountains. After giving exhibitions before the war department at Washington, we will go north



Major Davidson's Design for Gun Auto

through Baltimore, Philadelphia and New York to Buffalo, spending a week or ten days giving exhibitions at the exposition, and from there back to Chicago, making in all between two and three thousand miles' run over roads of all conditions. The completing of these carriages in our manual training shops will enable my gun crew to become perfectly familiar with the whole carriage, as they will practically do a great deal of the constructive work.

So much interest was taken in our experiment last summer by the general public that I thought these facts might be of interest to you and possibly to your readers. Respectfully, Maj. R. P. Davidson, Northwestern Military Academy.

The governor of St. Petersburg, Russia, has placed an order for ten motor vehicles to be used for municipal purposes.

## THE WEEKLY PATENT OFFICE BUDGET

**T**HE principal inventions in the week's batch of motor vehicle patents comprise a braced flexible running gear, a compartment tire and two jokes. The descriptions below present the most notable features of each.

### SPRING "STORAGE BATTERY"

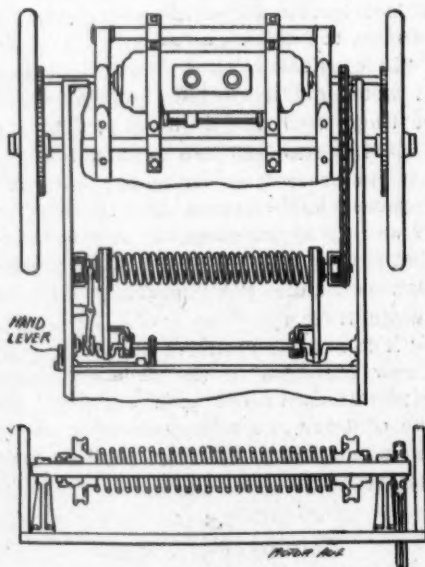
Letters patent No. 668,768, dated February 26, 1901, to Walter A. Bradley, of Buffalo, N. Y.

There is one idea that sticketh closer than a brother to the inventive profesh'. It is the one relating to springs which may be wound when the machine is healthy and full of ginger; and be unwound to help along the good work when the flesh is weak and the ginger gone. This inventor has the disease caused by the propagation of the aforesaid idea in the acute form. It may become chronic with him later on, if his friends are lavish with that much abused commodity called praise.

The accumulator in question comprises a strong spiral spring placed crosswise in the body of the vehicle and it is supposed to store the energy due to the arrest of the forward movement of the vehicle and to do several other things with it. The spring is attached at its ends to loosely mounted clutch members on a counter shaft driven by the chain from the motor shaft, which is geared directly to the vehicle wheels for driving. One of the end clutches is of the friction variety, its shaft member being splined to the counter shaft so that it may be made to slide in and out of engagement. The other clutch is of the ratchet type with its fixed axle member so arranged that it may pass the spring or loose

member inoperatively when rotated in one direction, but be caused to rotate with the spring member when moving in the other.

Each loose or spring clutch member also acts as a brake drum for a brake band whose actuating end is secured to a crank rod parallel with the spring shaft and placed a short distance ahead of it in the vehicle body. This cranked rod is controlled by the operator's hand lever and also connects with a cam link movement which operates at certain times to throw the friction clutch in or out of engagement. The brake strap cranks



Bradley's Spring "Storage Battery"

are inclined with reference to each other so that both do not exert the maximum tension on the respective brake straps at the same time. The relative movements of the cranks and the cam link

mechanism are arranged so that they are timed in action to secure the desired combination of results.

When the operator's lever is in one of its four positions the friction clutch members are in engagement and the brake band on the spring member of the ratchet clutch is drawn tight to prevent rotation of that member. During this engagement of the friction clutch the spring is wound up by the rotation of the counter shaft. If, now, the driver chooses to stop his motor the spring will unwind and propel the vehicle backward. The inventor says it will. Or, by moving the lever another notch forward, the brake band on the friction clutch will also be tightened and the vehicle brought to a sudden stop.

The third position of lever loosens the friction clutch engagement with the axle and, by leaving both brake bands set, also leaves the spring independently locked, either under or not under tension, with the vehicle running ahead. If brought into this position when the spring is charged the energy which has been previously pushed into the spring by winding it up, is stored for keeps until wanted or something breaks.

When the lever is in its fourth position the ratchet clutch brake band is loosened and consequently the spring unwinds at that end and by the engagement of the ratchet clutch helps to drive the vehicle. This service is valuable through a muddy spot on a Chicago street or when making a record up Pike's peak. It is also valuable, if the vehicle is driven by a gasoline motor, for starting the motor, the spring being kept in charged condition while the vehicle is not running and the motor is stopped.

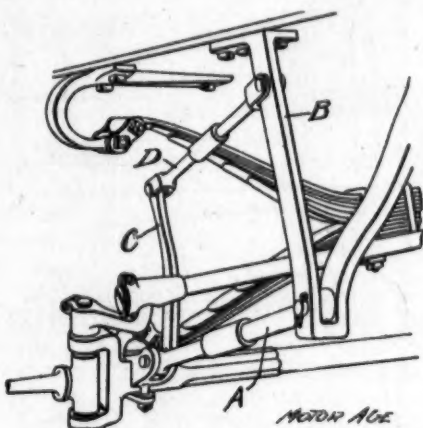
#### FRONT AXLE BRACE

Letters patent No. 668,639, dated February 26, 1901, to Charles E. Hadley, of Hartford, Conn., assignor to the Columbia & Electric Vehicle Co.

This invention relates to a bracing structure to resist the strains upon the front axle of a motor vehicle and, particularly, to prevent the axle from twisting and from moving in a horizontal

plane, while at the same time it is free to move vertically relative to the vehicle body or running gear in order to compensate for rough road surfaces.

The axle is secured to the body by



Hadley's Front Axle Brace

suitable springs which permit a limited vertical play. The resistance of the axle to fore and aft thrust is positively assured by a jack bolt A at each end, and which are each hinged to the axle and also to the body or a fixed portion of the running gear frame. In the specified construction the point of connection of the jack bolt to the body is the lower corner of a frame or bracket B. An arm C, nearly vertical, is secured rigid against rotation on the axle and is connected by a link or pivoted rod D with the bracket B. The arms B and C and links A and D are arranged substantially in a parallelogram. This arrangement prevents twisting of the axle and horizontal movement, and at the same permits it to move freely vertically with respect to the body of the vehicle.

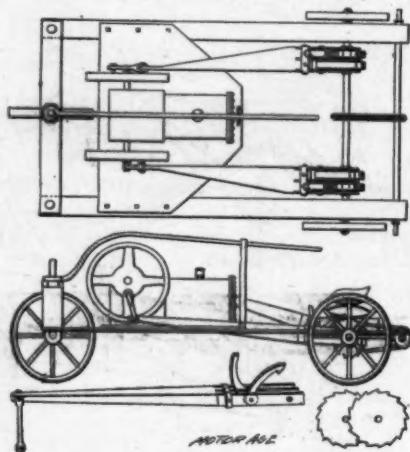
#### SURE WAY TO CHANGE SPEED

Letters patent No. 668,769, dated February 26, 1901, to Joseph Break, of Spokane, Wash.

This is a motor vehicle with a forward and back drive and a speed change gear. It is driven by a horizontal gasoline engine. Both the engine and the vehicle are strong and substantial. The inventor can take that grain of comfort

unto himself, for its strength is obviously its strongest talking point.

On the rear axle at each side of the running gear is hinged a long lever arm



Break's Speed Change Gear

to whose forward end is pivoted a link secured to the fly wheel on that side of the engine. The rotation of the fly wheel "swings" the lever arms up and down. Also on the wheel shaft at each side are two ratchet disks, with teeth in reverse directions, while on the swinging lever arms are pawls of two kinds. One kind serves to push one set of ratchet disks backward to drive the vehicle backward. The other engages the other set of ratchets and pulls them forward to drive the vehicle ahead.

To change the direction of drive the operator has simply to disengage one set of ratchets and pawls and throw the other set into engagement; probably with his foot.

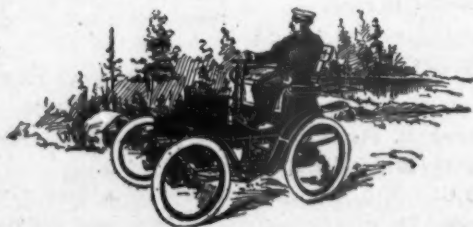
The speed of the vehicle may be changed by varying the distance from the center of the fly wheels at which the driving links on the forward ends of the swinging levers are attached. Another speed changed is also furnished by a second axle a mounted on the extreme rear end of the vehicle frame and driven by sprockets and chain from the main drive axle. If a higher speed is desired the wheels are removed from the main axle and attached to this secondary axle! Steering is accomplished by a long steering tiller projecting backward from the steering post of the single front wheel.

This patent calls to mind that erstwhile popular ballad, "She's More to be Pitted than Censured."

#### COMPARTMENT TIRE

Letters patent No. 668,994, dated February 26, 1901, to John B. Mahana and Adrian A. Pompe, of Toledo, Wash.

This is a compartment pneumatic tire with three inner tubes one above the other, each with a separate valve and each having sufficient loose material in its wall that should one or more be punctured the remaining may be inflated to an additional degree which will compensate for the loss of sustaining pressure in the punctured tube or tubes.





# THE MOTOR AGE

## CURRENT MECHANICAL TOPICS

**B**ECAUSE there are so many builders of gasoline motors in the country it is natural that also many of them are studying and working hard to learn certain principles and rules which have already been learned in other quarters. The presentation of such facts is therefore greatly useful. Hence the Motor Age takes pleasure from time to time in printing practical data similar to that which here follows relative to the proper diameter of inlet and exhaust valves.

From authoritative data it has been ascertained that the velocity of air at atmospheric pressure and temperature, drawn into a vacuum through a pipe by means of an intermittent acting pump piston, is about eighty feet per second. The theoretical velocity of air into a continuous vacuum is about 1,157 feet per second. From the first figure may be deduced a formula for calculating the required diameter of the inlet and exhaust valves of a gas or gasoline motor, provided, in the first place, that the pipes are not of extremely great length or have a number of sharp bends, conditions which should be avoided in every case.

The velocity of the incoming air multiplied by the area of the inlet valve opening should equal the piston speed of the motor multiplied by the area of the piston. Letting  $v$  equal the velocity of air in feet per second,  $a$  the area of valve opening,  $V$  the velocity of piston travel in feet per second and  $A$  the area of the piston, it is evident that

$$va = VA \text{ or } a = \frac{VA}{v}$$

As  $v$  is the velocity of air in feet per second it must be multiplied by 720 to be brought into terms of inches and

minutes for a practical working formula, which will, then, read:

$$a = \frac{VA}{57600}$$

In this formula  $V$  also represents the velocity of the piston in inches per minute (which is equal to twice the stroke multiplied by the speed in revolutions per minute) and  $A$  is the area of the cylinder in square inches.

To put the formula into a still more readily applicable form diameters can be substituted for areas. Then if  $d$  is the diameter of the valve opening in inches,  $D$  the bore of cylinder or diameter of piston in inches,  $s$  the stroke of the piston in inches and  $n$  the number of revolutions per minute of motor with 3.1416 represented by  $P$ , the equation will read:

$$\frac{Pd^2}{4} = \frac{2sn}{57600} \times \frac{PD^2}{4}$$

Which, simplified, is

$$d^2 = \frac{snD^2}{28800}$$

As this formula does not take into consideration the fact that the temperature of the interior of the motor cylinder and combustion chamber is above atmospheric temperature, allowance must therefore be made for this condition of about 20 per cent. The formula will then read:

$$d^2 = \frac{snD^2}{23000}$$

Consequently

$$d = D \sqrt{\frac{sn}{23000}}$$

This gives the final proper diameter of the admission or inlet valve opening.

As the exhaust gases are above atmospheric temperature and pressure and thus of greater volume than the original charge, an allowance of an additional 20

per cent over the area of the inlet valve must be made. Hence the formula for determining the proper diameter of the exhaust valve opening will read:

$$d^2 = \frac{\pi n D^3}{19200}$$

And therefore

$$d = D \sqrt{\frac{\pi n}{19200}}$$

The proper diameters in inches of inlet valve openings for full charge of cylinder and at common motor speeds are given in the table below:

BORE- AND STROKE	REVOLUTIONS PER MINUTE OF MOTOR									
	300	450	600	750	900	1200	1500	1800	2100	2400
2 1/2 x 2 1/2					3/4	9/16	1	1 1/16	1 1/8	1 1/4
3 x 3				1/2	1/2	1 1/8	1 1/4	1 1/2	1 5/8	1 3/4
3 1/2 x 3 1/2			1/2	1/2	1 1/8	1 1/4	1 1/2	1 5/8		
4 x 4		1/2	1/2	1 1/8	1 1/4	1 1/2	1 5/8	2		
4 1/2 x 4 1/2	1 1/2	1 1/8	1 1/4	1 1/2	1 5/8	2				
5 x 5	1 1/2	1 1/4	1 1/2	2	2 1/4					
5 1/2 x 5 1/2	1 1/2	1 1/4	2 1/4	2 1/2						
6 x 6	1 1/2	2 1/4	2 1/2							
6 1/2 x 6 1/2	1 1/2	2 1/2								
7 x 7	2 1/2									

Table of Inlet Valve Diameters

These diameters are given to the nearest approximate fractions of an inch to avoid the use of decimals. Dimensions above and below the points at which the diameters of the openings would become impractical for the respective sizes of the motors are omitted.

The correct diameter of exhaust valves may be easily determined from this table. For an increase in area of 20 per cent, multiply the corresponding inlet valve diameter given in the table by 1.095. For an increase of 25 per cent multiply by 1.118, and for an increase of 30 per cent by 1.14.

#### VARIABLE STROKE MOTOR

One of the motor novelties of recent European introduction is the Cornu variable stroke gasoline engine, which, as its name implies, is capable of stroke variation in accordance with power required.

Fig. 1 of the accompanying illustrations shows the complete motor, and Fig. 2 is a sectional diagrammatic view.

The cylinder and piston are of ordinary construction. By means of a con-

necting rod A the piston movement transmits a rocking motion to a pivoted lever B. A second connecting rod, C,

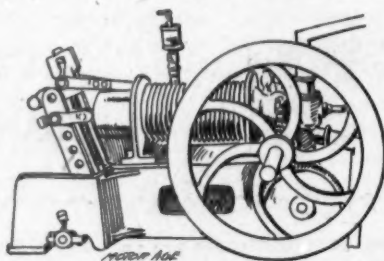


Figure 1—Cornu Motor

transmits the power, in turn, from the lever B to the fly wheel shaft crank D. The connection between the piston rod A and the lever B is by means of a movable block E. The position of the block E can be varied by rotation of the screw upon which it is non-rotatably mounted.

It is apparent that by moving the block E on the feed screw so that it is nearer to or away from the pivot of the lever B, the stroke and consequently the power of the motor will be varied accordingly.

The feed screw of the block E terminates in two ratchet wheels which are free to turn in a slot or opening in B. Either of these ratchets may be caused to rotate by allowing one of two pawls on a stay block to engage with it as the lever B rocks to and fro; and in this way a steady feed can be given to the screw and the block E in either direc-

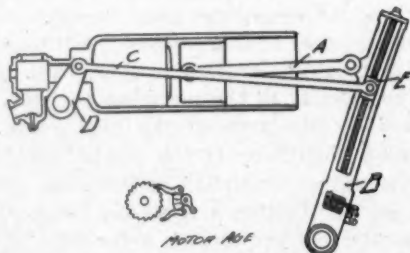


Figure 2—Cornu Motor

tion, to increase or to decrease the stroke of the motor piston.

In order to also vary the size of the compression space in the motor cylinder, the pivot center of the lever B is placed nearer the cylinder, in a vertical



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plane, than the mean position of the traveling block E.

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#### THE YELLOW DOG DROPPED DEAD

Here is one of those dainty little dialect stories relating to the experience of the uninitiated laity on its first automobile ride. It is due to the invitation of a member of a Green Bay, Wis., cycle dealer to take a townsman out for a ride in his new gasoline vehicle, and is told in a local paper, as follows:

"Ah was walk do'n de street las' Sunday and Ah'll meet Halbert Lucilay, who 'll say, 'Hello, Joe, you want to took wan rad'?"

"'Rad'?" Ah, say, 'You bet, Ah'm weeling eef eet han't wan dem gosh blam' tendam bahceecle dat Ak Steve'son and me we'll rad' weet' eet from Madeeson two year' ago.'

"'No,' Halbert say, 'does han't no bahceecle dat Ah've got dees tam'. Eet eez wan dem hautomobile buggay.'

"'Well, Ah deen't know what dat eez, so Ah'll tell Halbert all raght, Ah'm weet' eet. We'll go up dere on de bahceecle store dat's belong to Lucilay Bruder, and Halbert she'll show me de machine. Eet's have four wheel' on de front and hand end of eet, weet' box and seat and reg'la' buggay top between de wheel'. Halbert he'll fill up de tank weet' six pall' of water and we'll push de machine ott de store.

"'Where's your horse, Halbert?' Ah'll hax.

"'Don't need anay,' Halbert say.

"'You t'ink Ah'm going to push date t'ing 'ro'n de street?—well, Ah guess nit,' Ah say, and Ah'll start to walk off.

"'Hold on, Joe,' Halbert say, 'dees t'ing eez run eetself weet'ott no push or pull.'

"'Ah'll go back wance more again, and just 'bo't dees tam' Halbert he'll pull ott wan cranks and he'll put eet een de machine and give eet four, fav' couple of twist. Den de noise eez commence and de hautomobile buggay eez begin to jump up and do'n lak' wan dem fancay horse dat eez hanxious to get start.'

"'Jump een,' Halbert say.

"'Not much,' Ah say, 'You get een first

yourself. Ah han't going to run de risk of get mah neck broke alone.'

"'So Halbert he'll get een de machine and Ah'll clam' een weet' eet, needer. Halbert he'll push on de handle and we'll start. We'll go lak' de cev' when she's sue for murder, and all dat Halbert he'll have to do eez to push on de handle. When he'll want eet to stop or go slow he'll pull and de hautomobile eez mind eet. We'll go do'n Main street and up Section street and back again, and den we'll go on Frenchto'n and back to de store.

"'When we'll pass on Hurwan Bruder dere store, Mayor Spies' she horse was hitch on wan dem telephome pole ott dere and when de hautomobile was come 'long eet's scare de Dicken' ott of eet and ett's try to clam' de pole.

"'Up dere on Frenchto'n dere was wan yellow dogs dat's come ott on de street to bark when eet's see de machine go past, and when eet's look for de horse dat eet's suppose was pull eet and can't see anay eet's drop dead on de spot. Henry Cole horse was blam' near scare to deat', needer, on dat machine. But eet eez fan' t'ing just de sam', and Ah'll eemagine dat Ah was wan dem rich meel-lonaire when Ah was rad' eem eet. Eet's have big rheumatic tire on de wheel, you know, lak' dem bahceecle, and de t'ing dat's tak de place of de horse eez gasoline and wind, mix up weet' little water."

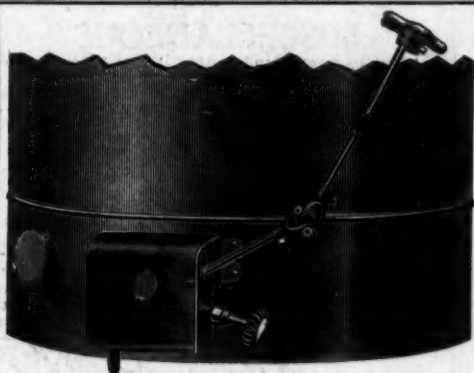
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#### ADVICE TO AMATEUR BUILDERS

L. F. Davis, a Motor Age subscriber at Statesboro, Ga., writes: "I see a demand for a motor vehicle here and in my surrounding country district of a less expensive kind than those now on the market and think of trying the experiment of building a few of such a type as will meet this demand. Any suggestions you will give on this line will doubtless be of value to most of your readers."

To Mr. Davis and to others who may be of the same way of thinking the best advice the Motor Age can offer is to investigate the risks to be assumed before attempting anything of the kind. For the benefit of those who wish to ex-





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periment, for educational purposes or otherwise, Motor Age publishes a book called "The Construction of a Motor Vehicle," which contains all the details required in the building of a machine. The amateur builder will do well to reflect, however, on the amount of testing and trying, at enormous expense, which has been necessary to the production of the vehicles now on the market. The building of an automobile is a work not to be lightly undertaken and it may be accepted as certain that the first expense will be far greater than the cost of the best vehicles now offered to the public. As an educational feature, however, the attempt is to be commended.


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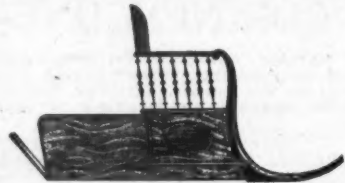
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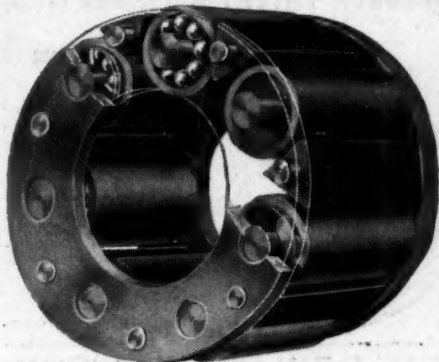
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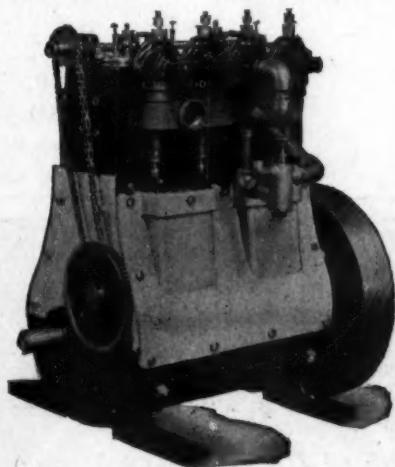
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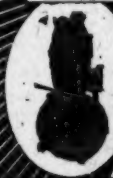
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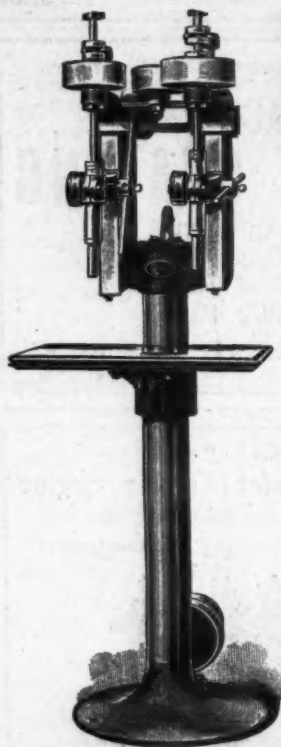


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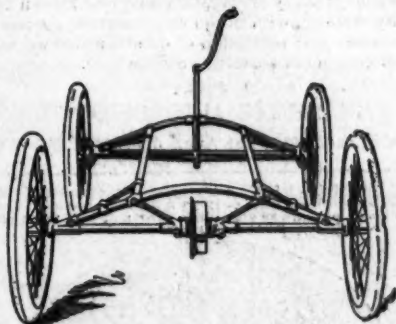
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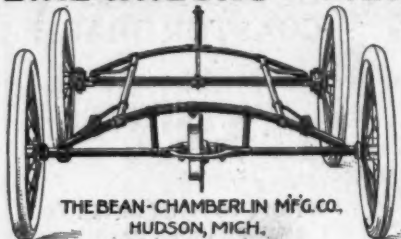
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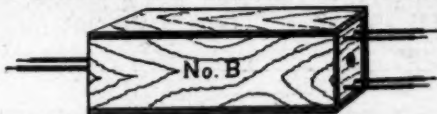
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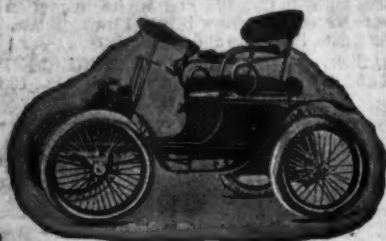
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